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AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 Claim 1 (currently amended): A frequency hopping  
2 communications device for transmitting signals on a  
3 plurality of M subcarrier signals in parallel, each of said  
4 M subcarrier signals corresponding to a different one of M  
5 subcarrier signal frequencies, said M subcarrier signal  
6 frequencies being a subset of N subcarrier frequencies on  
7 which said communications device may transmit signals over  
8 time, where M and N are positive integers and where  $M < N$ ,  
9 said frequency hopping communications device including:  
10 a frequency control circuit for controlling which of  
11 the N subcarrier frequencies are generated and used by said  
12 device for the transmission of signals;  
13 a plurality of M separate subcarrier signals paths  
14 operating in parallel, each of the M subcarrier signal  
15 paths including a programmable signal generator coupled to  
16 said frequency control circuit, a power amplification  
17 circuit and a filter circuit, said programmable signal  
18 generator for generating a subcarrier signal determined by  
19 said frequency control circuit and having a subcarrier  
20 frequency corresponding to said subcarrier signal path to  
21 which said signal generator corresponds; and  
22 a combining circuit for combining analog subcarrier  
23 signals corresponding to different subcarrier signal paths  
24 prior to transmission.

1 Claim 2 (original): The device of claim 1, wherein each of  
2 the M signal filter circuits, that each correspond to a  
3 different one of said M signal paths, is a fixed filter, at  
4 least one of the M fixed filters having a passband

5 bandwidth at least equal to Y times the average frequency  
6 spacing between the N frequencies that said device can use  
7 as the N subcarrier frequencies, where Y is a positive  
8 number greater than 1.

1 Claim 3 (currently amended): The device ~~method~~ of claim 2,  
2 wherein  $Y \geq N$  divided by M.

1 Claim 4 (currently amended): The device ~~method~~ of claim 2,  
2 wherein Y is at least as large as N.

1 Claim 5 (currently amended): The device ~~method~~ of claim 2,  
2 wherein each of said M signal filter circuits are identical  
3 fixed filters each having a passband bandwidth covering the  
4 full set of N subcarrier signal frequencies which may be  
5 used by said device.

1 Claim 6 (currently amended): The device ~~method~~ of claim 5,  
2 wherein the M subcarrier signals are OFDM subcarrier  
3 signals and where the N subcarrier frequencies are evenly  
4 spaced frequencies.

1 Claim 7 (original): The device of claim 2, wherein the  
2 fixed filter included on each of said M signal paths is  
3 positioned in series with said corresponding power  
4 amplification circuit either before or after the  
5 corresponding power amplification circuit.

1 Claim 8 (original): The device of claim 7,  
2 wherein the programmable signal generator included in  
3 each subcarrier signal path generates an analog subcarrier  
4 signal; and

5        wherein said power amplification circuit and said  
6 filter circuit included in each subcarrier signal path are  
7 analog circuits.

1 Claim 9 (original): The device of claim 1, wherein each of  
2 the M signal filter circuits, that each correspond to a  
3 different one of said M signal paths, is a programmable  
4 filter.

1 Claim 10 (original): The device of claim 9, wherein each  
2 of the M programmable filters has a passband corresponding  
3 to the subcarrier signal frequency of the subcarrier signal  
4 generated by the programmable signal generator circuit  
5 included on the same subcarrier signal path as the  
6 programmable filter.

1 Claim 11 (original): The device of claim 10, wherein the  
2 programmable filters have a passband which has a bandwidth  
3 sufficient to pass said subcarrier signal but reject the  
4 nearest neighboring one, in frequency, of said N subcarrier  
5 signals.

1 Claim 12 (original): The device of claim 9, wherein said  
2 device further transmits information using at least one  
3 additional preselected subcarrier frequency, the device  
4 further comprising:  
5        an additional subcarrier signal path including an  
6 amplifier and fixed filter for amplifying and filtering a  
7 subcarrier signal corresponding to said additional  
8 preselected subcarrier frequency.

1 Claim 13 (original): The device of claim 12, where said  
2 additional subcarrier frequency corresponds to a control  
3 channel used to transmit control information.

1 Claim 14 (currently amended): A frequency hopping  
2 communication method for use in a communications system  
3 wherein a device can transmit information using M  
4 subcarrier signals at a time, each of the M subcarrier  
5 signals corresponding to a different subcarrier frequency,  
6 where M and N are positive integers and where M is less  
7 than N and where N is the total number of different  
8 subcarrier frequencies said device can use over time, the  
9 method comprising:  
10 i) operating M programmable signal generators to  
11 generate said M subcarrier signals;  
12 ii) separately processing each of the M  
13 subcarrier signals to produce M processed subcarrier  
14 signals, the processing of each of said M subcarrier  
15 signals including a amplification operation and a filtering  
16 operation, said separate processing thus including M  
17 separate filtering operations; and  
18 iii) combining the M processed subcarrier signals  
19 to generate a frequency division multiplexed transmission  
20 signal;  
21 iv) controlling at least one of said M  
22 programmable signal generators to change the frequency of  
23 the subcarrier signal generated by said at least one  
24 programmable signal generator; and  
25 v) repeating steps (i), (ii), and (iii).

1 Claim 15 (original): The method of claim 14, wherein said  
2 M subcarrier signals are analog signals and wherein said  
3 filtering operation is an analog filtering operation.

1 Claim 16 (original): The method of claim 14, wherein said  
2 M separate filtering operations are performed using M  
3 separate fixed filters, at least one of the M fixed filters  
4 having a bandwidth at least equal to Y times the average

5 frequency spacing between the N frequencies that said  
6 device can use as the N subcarrier frequencies, where Y is  
7 a positive number greater than 1.

1 Claim 17 (original): The method of claim 16, wherein  $Y \geq N$   
2 divided by M.

1 Claim 18 (original): The method of claim 16, wherein Y is  
2 equal to or greater than N.

1 Claim 19 (original): The method of claim 15, wherein said  
2 M separate filtering operations are performed using  
3 identical fixed filters each having a bandwidth covering  
4 the full set of N subcarrier signal frequencies which may  
5 be used by said device.

1 Claim 20 (original): The method of claim 19, wherein the N  
2 subcarrier signals are OFDM subcarrier signals.

1 Claim 21 (original): The method of claim 14, wherein said  
2 M separate filtering operations are performed using M  
3 separate programmable filters, the frequency of each of  
4 each of the M programmable filters corresponding to the  
5 frequency of the subcarrier signal being filtered.

1 Claim 22 (original): The method of claim 14, further  
2 comprising:  
3 changing the amount of power amplification performed  
4 on one of the M subcarrier signals when the frequency of  
5 said subcarrier signal is changed.

1 Claim 23 (original): The method of claim 16, wherein  
2 controlling at least one of said M programmable signal

3 generators to change the frequency of the subcarrier signal  
4 includes:

5 operating said M programmable generators to switch  
6 from generating a first set of M subcarrier signals  
7 corresponding to a first set of M uniformly spaced  
8 subcarrier frequencies to generating a second set of M  
9 subcarrier signals corresponding to a second set of M  
10 uniformly spaced subcarrier frequencies, a first subcarrier  
11 frequency in said first set of M subcarrier frequencies  
12 being separated from a first subcarrier frequency in said  
13 second set of M subcarrier frequencies by a frequency  
14 spacing that is less than Y times the frequency spacing  
15 between subcarrier signals in said first and second sets of  
16 M subcarrier signals.

1 Claim 24 (new): A frequency hopping communications device  
2 for transmitting signals on a plurality of M subcarrier  
3 signals in parallel, each of said M subcarrier signals  
4 corresponding to a different one of M subcarrier signal  
5 frequencies, said M subcarrier signal frequencies being a  
6 subset of N subcarrier frequencies on which said  
7 communications device may transmit signals over time, where  
8 M and N are integers and where  $M < N$ , said frequency hopping  
9 communications device including:

10 frequency control means for controlling which of the N  
11 subcarrier frequencies are generated and used by said  
12 device for the transmission of signals;

13 a plurality of M separate subcarrier signals paths  
14 operating in parallel, each of the M subcarrier signal  
15 paths including a programmable signal generator means for  
16 generating a corresponding one of the M subcarrier signals,  
17 power amplification means for amplifying the corresponding  
18 one of the M subcarrier signals and filter means for  
19 filtering the corresponding one of the M subcarrier

1 signals, said programmable signal generator means  
2 generating a subcarrier signal determined by said frequency  
3 control means and having a subcarrier frequency  
4 corresponding to said subcarrier signal path to which said  
5 signal generator corresponds; and  
6 combining means for combining analog subcarrier  
7 signals corresponding to different subcarrier signal paths  
8 prior to transmission.

1 Claim 25 (new): The device of claim 24, wherein each of  
2 the M signal filter means is a fixed filter, at least one  
3 of the M fixed filters having a passband bandwidth at least  
4 equal to Y times the average frequency spacing between the  
5 N frequencies that said device can use as the N subcarrier  
6 frequencies, where Y is a positive number greater than 1.

1 Claim 26 (new): The device of claim 25, wherein  $Y \geq N$   
2 divided by M.

1 Claim 27 (new): The device of claim 25, wherein Y is at  
2 least as large as N.

1 Claim 28 (new): The device of claim 25, wherein each of  
2 said M signal filter means are identical fixed filters each  
3 having a passband bandwidth covering the full set of N  
4 subcarrier signal frequencies which may be used by said  
5 device.

1 Claim 29 (new) A computer readable medium including machine  
2 executable instructions for controlling a communications  
3 device to implement the steps of a frequency hopping  
4 communication method, the method being for use in a  
5 communications system wherein a device can transmit  
6 information using M subcarrier signals at a time, each of

7 the M subcarrier signals corresponding to a different  
8 subcarrier frequency, wherein M and N are integers and  
9 where M is less than N and where N is the total number of  
10 different subcarrier frequencies said device can use over  
11 time, the method comprising the steps of:

12 i) operating M programmable signal generators to  
13 generate said M subcarrier signals;

14 ii) separately processing each of the M  
15 subcarrier signals to produce M processed subcarrier  
16 signals, the processing of each of said M subcarrier  
17 signals including a amplification operation and a filtering  
18 operation, said separate processing thus including M  
19 separate filtering operations; and

20 iii) combining the M processed subcarrier signals  
21 to generate a frequency division multiplexed transmission  
22 signal;

23 iv) controlling at least one of said M  
24 programmable signal generators to change the frequency of  
25 the subcarrier signal generated by said at least one  
26 programmable signal generator; and

27 v) repeating steps (i), (ii), and (iii).